



ACTUATORS

Pneumatic Cylinders

INTRODUCTION

Wolseley Industrial Group Valve & Automation, or WIGVA, is a premier valve automation center. We are a member of the Wolseley Industrial Group, the industrial division of Ferguson Enterprises, Inc. Since 1981, our facility has provided professional automation packages and fabrication solutions. We are experts in actuating quarter-turn and linear valves of all types and sizes, as well as fabricating custom components. With combined application and technical experience, we have been serving Pulp & Paper, Mining, Chemical, Food & Beverage, and general industrial businesses for decades. In 2011, our facility became ISO 9001:2008 registered. Quality and the continuing improvement process are evident in our products and service. Dedication to quality is what drives our facility to incorporate the latest technologies such as 3D CAD and CNC milling into our processes.



OVERVIEW

WIGVA offers pneumatic valve actuators for linear valves such as knife gates, slide gates, and wedge gate valves. Actuators can be supplied with double-acting (air-to-extend, air-to-retract) and spring-return (air energized, spring to fail position extended or retracted) configurations depending on your control needs. Coupled with actuation accessories such as solenoids, position switches, and positioners, WIGVA can supply a valve with a complete control package. WIGVA can also supply hydraulic linear actuators. Whatever your linear actuator and control needs are, contact WIGVA with your specific application requirements.

PNEUMATIC CYLINDER FEATURES

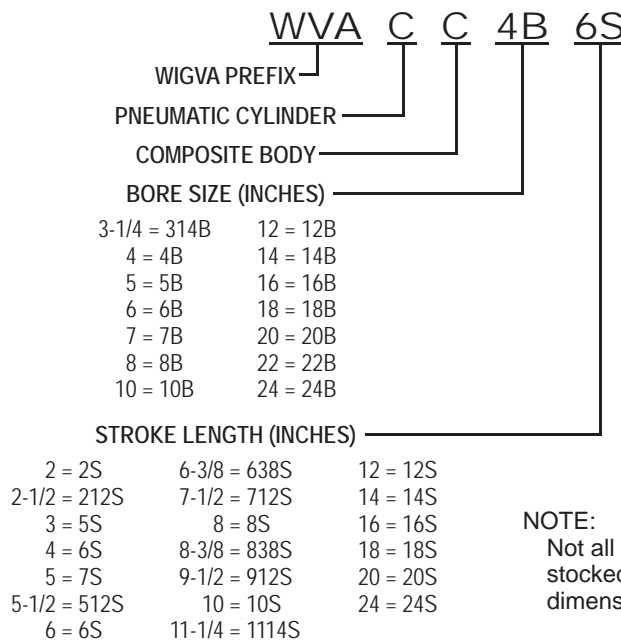
- Double Acting
- Bore Sizes 3-1/4" through 24"
- Pressure Rated to 150 PSI Air
- Composite Cylinder*
- Externally Removable Piston Rod Gland
- Lifting Eye (Cap welded, 5" Bore & Larger)
- Dual Piston Rod Seal for Integrity and Rod Wiper
- Grooved Alignment Between Body and Caps
- Factory Tested
- -10°F to 165°F Temperature Range (Standard Seals)

PNEUMATIC CYLINDER OPTIONS

- Stainless Steel Piston Rods
- Spring Return (Spring Extended or Retracted)
- Double Rod End Style
- Low or High Temperature Seals
- Configured for Water Service
- Lifting Eyes (Tie Rod Mounted)
- Epoxy Coated Exterior
- Stroke Adjuster
- Steel Cylinder Body

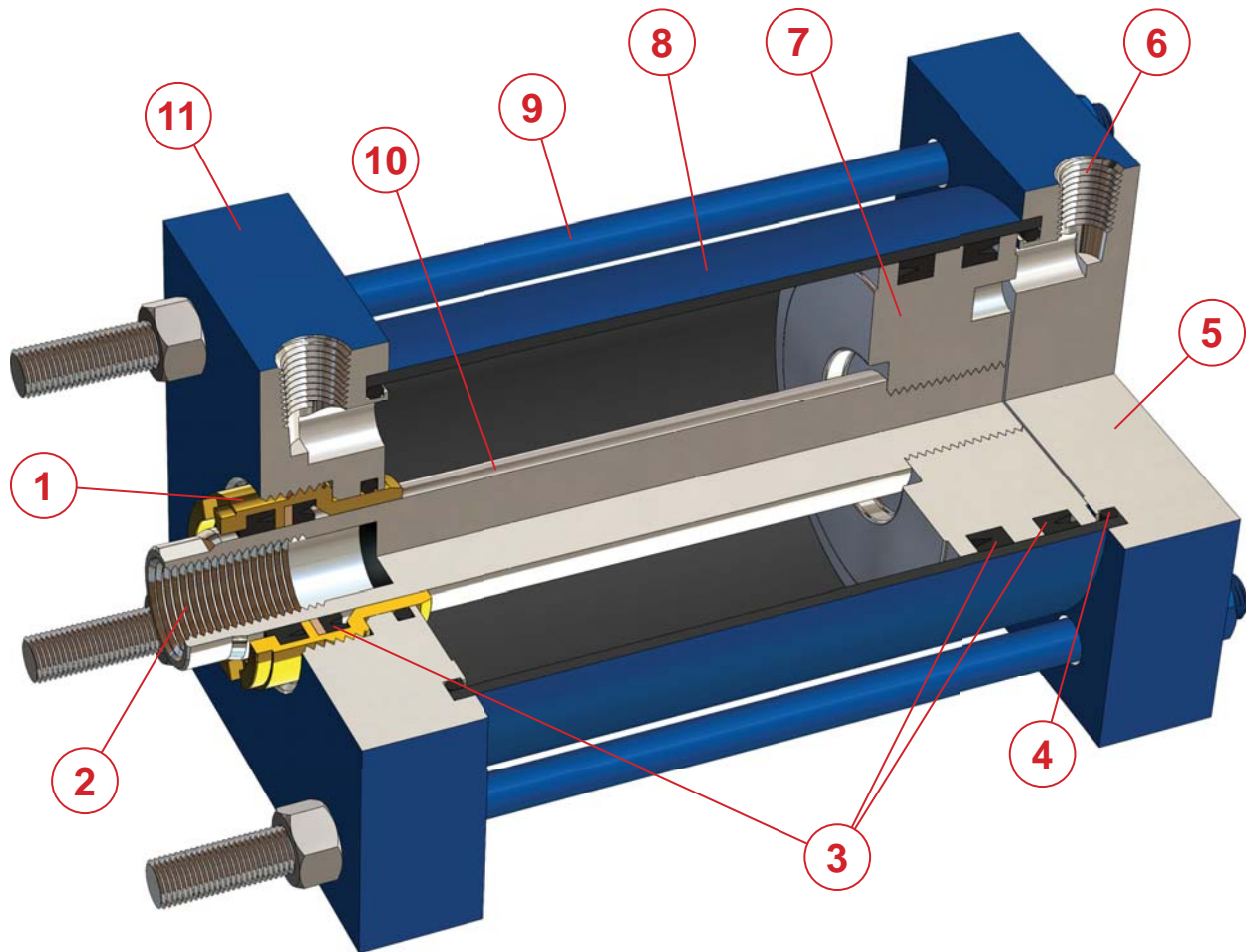
* Composite tubing is not to be exposed to fluids which have a pH level lower than 3 or higher than 11.

PART NUMBER MATRIX

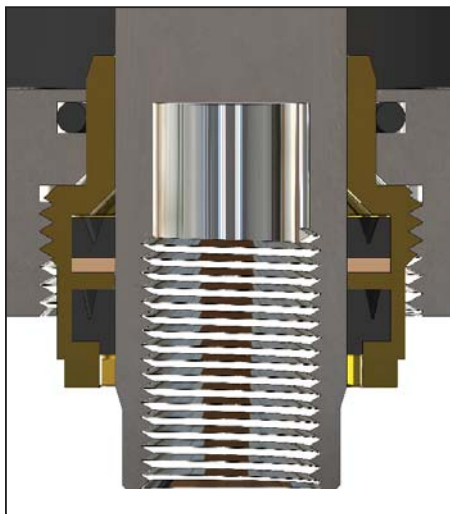


NOTE:

Not all combinations of bore by stroke are stocked. Consult WIGVA for your specific dimensional needs.

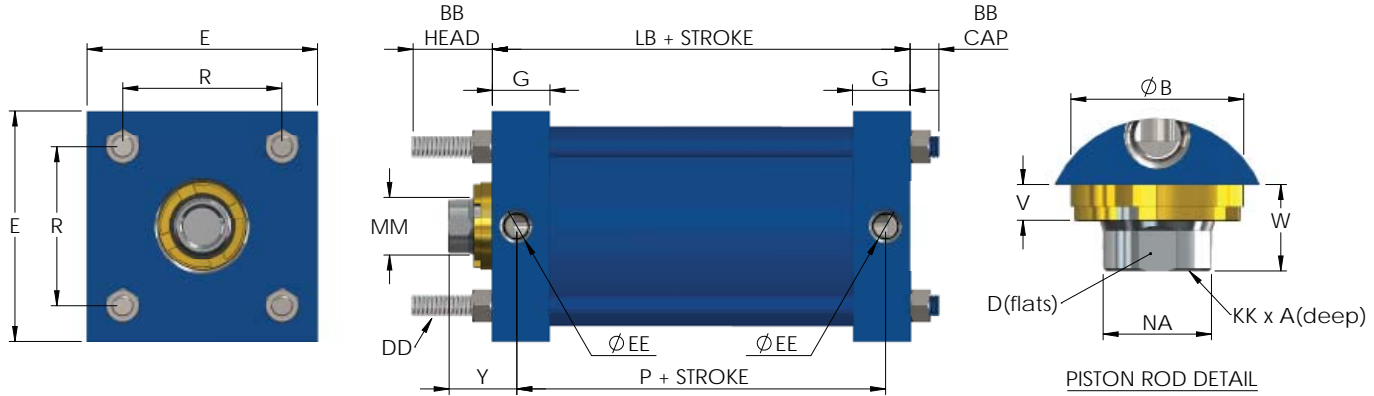


FEATURES DESCRIPTION



Externally Removable/
Replaceable Rod Gland
Assembly with Dual Piston Rod
Seals/Wiper

1. The Rod Gland Assembly is externally removable without disassembling the cylinder. The rod gland incorporates a primary and secondary seal to assure leak-free service and longevity. The secondary seal acts as a rod wiper to prevent contamination from entering the cylinder. In addition, the secondary seal acts as a back up in the event of primary seal failure.
2. Standard cylinders include a female threaded piston rod connection and come standard with two wrench flats to facilitate rod end attachment.
3. Wear compensating lip seals are used throughout the rod gland and piston assembly to assure leak free operation and optimal performance over the life of the cylinder.
4. O-ring sealed alignment grooves are located at each end of the body to assure tube to head alignment and leak free operation.
5. Heads and caps are made from heavy duty steel and are machined to provide concentricity.
6. NPT air supply ports are standard throughout the entire bore range and side ported to facilitate accessory mounting.
7. Pistons are constructed from a single piece, nodular iron.
8. Cylinder bodies are composite material for strength, corrosion resistance, lighter weight, and smooth operation.
9. All tie rods are made from high strength material rated to a minimum yield of 100,000 PSI.
10. All piston rod assemblies utilize induction case hardened, medium carbon steel and are hard chrome plated and polished to a 10 RMS surface finish.
11. Cylinder exterior is enamel coated for added corrosion resistance.



Dimensions (inches)

| Bore | MM | KK | A | øB | D | NA | V | W | Y | BB | | DD | E | EE (NPTF) | G | NA | R | Add Stroke (Inches) | |
|-------|-------|------------|------|-------|------|------|------|------|------|------|------|------------|-------|-----------|------|------|-------|---------------------|------|
| | | | | | | | | | | Head | Cap | | | | | | | LB | P |
| 3-1/4 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.31 | 0.75 | 1.19 | 1.38 | 0.50 | 3/8 - 24 | 4.00 | 1/4" | 1.00 | 0.94 | 2.76 | 3.25 | 2.38 |
| 4 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.31 | 0.75 | 1.19 | 1.38 | 0.50 | 3/8 - 24 | 4.50 | 3/8" | 1.00 | 0.94 | 3.32 | 3.25 | 2.38 |
| 5 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.31 | 0.75 | 1.19 | 1.81 | 0.63 | 1/2 - 20 | 5.50 | 3/8" | 1.00 | 0.94 | 4.10 | 3.50 | 2.63 |
| 6 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.38 | 0.88 | 1.31 | 1.81 | 0.63 | 1/2 - 20 | 6.50 | 3/8" | 1.00 | 0.94 | 4.88 | 3.38 | 2.50 |
| 7 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.38 | 0.88 | 1.31 | 2.00 | 0.75 | 5/8 - 18 | 7.50 | 3/8" | 1.00 | 0.94 | 5.73 | 3.50 | 2.63 |
| 8 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.38 | 0.88 | 1.31 | 2.00 | 0.75 | 5/8 - 18 | 8.50 | 3/8" | 1.00 | 0.94 | 6.44 | 3.50 | 2.63 |
| 10 | 1.000 | 3/4 - 16 | 1.13 | 1.499 | 0.88 | 0.94 | 0.38 | 1.00 | 1.56 | 2.25 | 0.88 | 3/4 - 16 | 10.63 | 1/2" | 1.31 | 0.94 | 7.92 | 4.25 | 3.13 |
| 12 | 1.375 | 1 - 14 | 1.63 | 1.999 | 1.13 | 1.31 | 0.38 | 1.00 | 1.56 | 2.25 | 0.88 | 3/4 - 16 | 12.75 | 1/2" | 1.31 | 1.31 | 9.40 | 4.31 | 3.19 |
| 14 | 1.375 | 1 - 14 | 1.63 | 1.999 | 1.13 | 1.31 | 0.38 | 1.00 | 1.69 | 2.50 | 1.00 | 7/8 - 14 | 14.75 | 3/4" | 1.56 | 1.31 | 10.90 | 4.88 | 3.50 |
| 16 | 1.750 | 1 - 14 | 1.63 | 2.374 | 1.50 | 1.69 | 0.50 | 1.25 | 1.94 | 2.75 | 1.13 | 1 - 14 | 17.00 | 3/4" | 1.56 | 1.69 | 12.59 | 5.13 | 3.75 |
| 18 | 2.000 | 1-1/2 - 12 | 2.25 | 2.624 | 1.69 | 1.94 | 0.56 | 1.50 | 2.19 | 3.25 | 1.25 | 1-1/8 - 12 | 19.00 | 3/4" | 1.69 | 1.94 | 14.14 | 5.63 | 4.25 |
| 20 | 2.000 | 1-1/2 - 12 | 2.25 | 2.624 | 1.69 | 1.94 | 0.56 | 1.50 | 2.19 | 3.25 | 1.38 | 1-1/4 - 12 | 21.00 | 3/4" | 1.69 | 1.94 | 15.77 | 5.88 | 4.50 |
| 22 | 3.000 | 2-1/4 - 12 | 3.50 | 3.749 | 2.63 | 2.88 | 0.63 | 2.25 | 3.06 | 3.50 | 1.38 | 1-1/4 - 12 | 23.00 | 3/4" | 1.94 | 2.88 | 17.18 | 6.50 | 4.88 |
| 24 | 3.500 | 2-1/2 - 12 | 3.50 | 4.249 | 3.00 | 3.38 | 0.63 | 2.25 | 3.56 | 3.50 | 1.38 | 1-1/4 - 12 | 25.25 | 3/4" | 2.44 | 3.38 | 18.74 | 7.75 | 5.13 |

Standard Weight (pounds)

| Bore | Add Values for Total Weight | |
|-------|-----------------------------|---------------------------|
| | Base Weight | Weight Per Inch of Stroke |
| 3-1/4 | 12.63 | 0.43 |
| 4 | 16.57 | 0.45 |
| 5 | 26.66 | 0.57 |
| 6 | 36.15 | 0.60 |
| 7 | 50.06 | 0.75 |
| 8 | 64.15 | 0.78 |
| 10 | 123.22 | 1.18 |

| Bore | Add Values for Total Weight | |
|------|-----------------------------|---------------------------|
| | Base Weight | Weight Per Inch of Stroke |
| 12 | 178.39 | 1.47 |
| 14 | 273.58 | 1.74 |
| 16 | 377.17 | 2.55 |
| 18 | 517.89 | 3.11 |
| 20 | 657.34 | 3.51 |
| 22 | 881.66 | 5.20 |
| 24 | 1269.61 | 6.08 |

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